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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/757,678

01/14/2004

George P. Latos

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09/07/2006

Stephen B. Salai, Esq.
Harter, Secrest & Emery LLP
1600 Bausch & Lomb Place
Rochester, NY 14604-2711

EXAMINER

VANATTA, AMY B

ART UNIT

PAPER NUMBER

3765

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

87

Office Action Summary	Application No.	Applicant(s)	
	10/757,678	LATOS ET AL.	
	Examiner	Art Unit	
	Amy B. Vanatta	3765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 12-16 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>05052004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I in the reply filed on 8/9/06 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Further with regard to the reply filed 8/9/06, it is noted that applicant inadvertently failed to elect among the species presented in the Election of Species requirement on page 4 of the Action. During a telephone conversation with Brian Shaw on August 24, 2006 a provisional election was made without traverse to prosecute the invention of Species A, the fleece, claim 17. Affirmation of this election must be made by applicant in replying to this Office action.

Claims 12-16 and 18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 6, 7, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kyle (US 4,629,858).

Kyle discloses a method of altering a pile fabric having projecting fibers of a given length, including illuminating the pile fabric by means of a laser beam 39 at spaced areas in a specific image pattern to shorten the fibers within the area of illumination; see Figs. 1-4, col. 1, lines 28-42, and col. 2, lines 56-66. The pattern is determined by providing a design pattern 17, and each point on the design pattern is sensed (col. 2, lines 22-31), with a corresponding input signal being sent to the controller 27. The controller processes the received signals and sends a signal to the laser generator 31 to form a pattern on the carpet which corresponds point to point with the pattern 17. This method forms a "stochastic image pattern" to the extent recited in claims 1 and 17. The length of the fibers (see 47; Fig. 3) adjacent the illuminated areas (see 41; Fig. 3) is maintained, as in claim 1. The spaced areas (41) which are treated by the laser beam ("illuminated") are spaced apart a distance which clearly would maintain the hand of the fabric, at least to the extent recited in claims 2 and 17 (see Figs. 1-4). All of the fibers in the illuminated area are shortened, as in claim 3 (see Fig. 3). Regarding claim 6, the fibers are eliminated corresponding to a depth of penetration of the laser beam, thus being substantially eliminated within the illuminated area (the "illuminated area" having a depth corresponding to the depth of penetration by the laser beam). The pile fabric shown by Kyle forms a "fleece" to the extent recited in claims 7 and 17.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 5, and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kyle (US 4,629,858).

Kyle discloses a method as claimed, however the illuminated areas do not comprise a circular pattern as in claim 4. It is clear from the disclosure of Kyle that any decorative pattern may be selected as the pattern 17. Designs on pile fabric are commonly provided in circular patterns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to illuminate the spaced areas in the method of Kyle in a circular pattern, since circular patterns are well known in the art, and it is within the routine skill in the art to select a pattern for the design imparted to the fabric as a matter of design choice. Furthermore, the patentability of the method cannot be predicated on a decorative design.

Regarding claim 5, the number of illuminated areas per inch is not disclosed by Kyle. It is within the routine skill in the art to select the number of illuminated areas per inch depending upon the desired pattern which is to be imparted to the fabric. It would have been obvious to one having ordinary skill in the art at the time the invention was made to illuminate at least 25 areas per inch in the method of Kyle, since it is within the routine skill in the art to choose a pattern as a matter of obvious design choice, and it

has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 8, Kyle discloses a method of imparting contour to a region of pile fabric, including illuminating the region of the pile fabric by means of a laser beam 39 at spaced illuminating areas in a specific image pattern to shorten the fibers within the area of illumination; see Figs. 1-4, col. 1, lines 28-42, and col. 2, lines 56-66. The pattern is determined by providing a design pattern 17, and each point on the design pattern is sensed (col. 2, lines 22-31), with a corresponding input signal being sent to the controller 27. The controller processes the received signals and sends a signal to the laser generator 31 to form a pattern on the carpet which corresponds point to point with the pattern 17. This method forms a "dithered image" to the extent recited in claim 8. The original fiber height (see 47; Fig. 3) adjacent the illuminated areas (see 41; Fig. 3) is maintained, as claimed. Although Kyle does not disclose that each illuminated area is less than 1000 microns, such a dimension depends upon the pattern which is being imparted to the pile fabric of Kyle. Designs on pile fabric comprising patterned regions of less than 1000 microns are conventional in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to illuminate the spaced areas in the method of Kyle such that each illuminated area is less than 1000 microns, since such patterns are well known in the art, and it is within the routine skill in the art to select a pattern size for the design imparted to the fabric as a matter of design choice. Furthermore, determining the optimal size of the patterned

regions in the method of Kyle would have been obvious to one having ordinary skill in the art since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 9, Kyle discloses burning the fibers within the illuminated area with the laser beam (col. 2, lines 58). Since this would encompass melting of the fibers, the energy density is selected as recited in claim 9. Regarding claim 10, Kyle discloses that the fibers are shortened within the illuminated area by means of the laser beam (col. 2, line 58, disclosing cutting, and see Fig. 3). Since the laser beam cuts the fibers, the energy density, illumination area, and duration are clearly selected as recited in claim 10. Regarding claim 11, the fibers are removed corresponding to a depth of penetration of the laser beam, thus being substantially removed within the illuminated area (the "illuminated area" having a depth corresponding to the depth of penetration by the laser beam).

7. Claims 1-11 and 17 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Kyle (US 4,629,858) in view of Costin (US 5,990,444).

As set forth above, Kyle discloses a method including illuminating the pile fabric by means of a laser beam 39 at spaced areas in a specific image pattern to shorten the fibers within the area of illumination; see Figs. 1-4, col. 1, lines 28-42, and col. 2, lines 56-66. The pattern is determined by providing a design pattern 17, and each point on the design pattern is sensed (col. 2, lines 22-31), with a corresponding input signal

being sent to the controller 27. The controller processes the received signals and sends a signal to the laser generator 31 to form a pattern on the carpet which corresponds point to point with the pattern 17. As set forth in the rejections above, it is the position of the examiner that this method forms a "stochastic image pattern" or a "dithered image" to the extent recited in claims 1, 8, and 17. To the extent that the imaging in the method of Kyle does not meet these limitations, however, it is noted that such means of transferring patterns are known in the art. Costin ('444) discloses a method of scribing graphics on materials using a laser. Costin teaches that the laser may be applied to fabrics or carpet (col. 3, lines 1-40; col. 30, line 25). Costin discloses that the image may be formed by pattern dither or diffusion dither (col. 17, lines 1-13; col. 41, lines 24-30; col. 42, lines 20-21). Such a method of image forming allows for the production of a greater variety of image types, since dithering converts the image to a black and white image (col. 16, line 59 through col. 17, line 13). This dithered image is a form of stochastic image. It would have been obvious to one having ordinary skill in the art at the time the invention was made to produce the pattern in the method of Kyle in a stochastic or dithered image, such as in claims 1, 8, and 17, in order to allow for a greater variety of pattern types to be produced by the laser, such as taught by Costin.

The length of the fibers, or original fiber height (see 47; Fig. 3), adjacent the illuminated areas (see 41; Fig. 3) is maintained, as in claims 1 and 8.

Although Kyle does not disclose that each illuminated area is less than 1000 microns, as in claim 8, such a dimension depends upon the pattern which is being imparted to the pile fabric of Kyle. Designs on pile fabric comprising patterned regions

of less than 1000 microns are conventional in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to illuminate the spaced areas in the method of Kyle such that each illuminated area is less than 1000 microns, since such patterns are well known in the art, and it is within the routine skill in the art to select a pattern size for the design imparted to the fabric as a matter of design choice. Furthermore, determining the optimal size of the patterned regions in the method of Kyle would have been obvious to one having ordinary skill in the art since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

The spaced areas (41) which are treated by the laser beam ("illuminated") are spaced apart a distance which clearly would maintain the hand of the fabric, at least to the extent recited in claims 2 and 17 (see Figs. 1-4). All of the fibers in the illuminated area are shortened, as in claim 3 (see Fig. 3). Regarding claims 6 and 11, the fibers are eliminated or removed corresponding to a depth of penetration of the laser beam, thus being substantially eliminated or removed within the illuminated area (the "illuminated area" having a depth corresponding to the depth of penetration by the laser beam). The pile fabric shown by Kyle forms a "fleece" to the extent recited in claims 7 and 17.

Regarding claim 4, the illuminated areas in the method of Kyle do not comprise a circular pattern. It is clear from the disclosure of Kyle that any decorative pattern may be selected as the pattern 17. Designs on pile fabric are commonly provided in circular

patterns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to illuminate the spaced areas in the method of Kyle in a circular pattern, since circular patterns are well known in the art, and it is within the routine skill in the art to select a pattern for the design imparted to the fabric as a matter of design choice. Furthermore, the patentability of the method cannot be predicated on a decorative design.

Regarding claim 5, the number of illuminated areas per inch is not disclosed by Kyle. It is within the routine skill in the art to select the number of illuminated areas per inch depending upon the desired pattern which is to be imparted to the fabric. It would have been obvious to one having ordinary skill in the art at the time the invention was made to illuminate at least 25 areas per inch in the method of Kyle, since it is within the routine skill in the art to choose a pattern as a matter of obvious design choice, and it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 9, Kyle discloses burning the fibers within the illuminated area with the laser beam (col. 2, lines 58). Since this would encompass melting of the fibers, the energy density is selected as recited in claim 9. Regarding claim 10, Kyle discloses that the fibers are shortened within the illuminated area by means of the laser beam (col. 2, line 58, disclosing cutting, and see Fig. 3). Since the laser beam cuts the fibers, the energy density, illumination area, and duration are clearly selected as recited in claim 10.

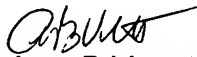
Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy B. Vanatta whose telephone number is 571-272-4995. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Welch can be reached on 571-272-4996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Amy B Vanatta
Primary Examiner
Art Unit 3765